

SAP Solution Brief

SAP Technology

SAP HANA Vora

Objectives

Solution

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Quick Facts

Gain Contextual Awareness for a Smarter Digital Enterprise with SAP HANA Vora™



The Best-Run Businesses Run SAP®

Bridge the divide between enterprise data and Big Data

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Our hyperconnected business environment generates new sources of data at an unprecedented rate. The ability to use Big Data stored in Hadoop for deeper insight presents [new opportunities for innovation and competitive advantage](#). The challenge lies in combining Big Data with evolving digital business processes in a way that is both simple and fast for making in-context decisions.

The companies that lead are those that can truly harness the power of all their data for new discoveries and more-informed decisions. This demands new approaches for processing, interpreting, and correlating raw data, such as that arriving from social media feeds or Internet of Things (IoT) sensors, with core business processes.

Ideally, management and processing of Big Data should be simple and cost-effective so it can be used in real-time business applications and enterprise-class analytics. Incoming data from

customers, partners, and smart devices should blend into enterprise processes, and business data should integrate smoothly with external data sources to support better decisions through greater context.

SAP believes there is a way to combine Big Data with operational business data to infuse each business decision with valuable context. It starts with a cost-effective approach to managing unstructured data and processing it faster to support the “what if” questions driving your business.



In-memory computing on Hadoop that is built for business

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Enable more precise decisions through greater context

Democratize data access for data science discovery

SAP HANA Vora™ is an in-memory query engine that plugs into the Apache Spark execution framework to provide enriched interactive analytics on Hadoop.

SAP HANA Vora can work as a stand-alone solution or in concert with the SAP HANA® platform to extend enterprise-grade analytics to Hadoop clusters. With SAP HANA Vora, you can enhance digital business processes with greater contextual awareness that results in the informed, instantaneous actions that can help you win more customers and leapfrog the competition.

SAP HANA Vora makes decisions more precise by enabling interactive and drill-down analysis across both corporate data in SAP HANA and Hadoop data. It democratizes access for data scientists and developers who can now easily enrich their candidate data set in Hadoop with corporate data. And a unified landscape simplifies ownership of Big Data for the IT department.

Bridge the divide between corporate data and Big Data to improve decisions through greater context.



Enable more precise decisions through greater context

In-memory computing on Hadoop that is built for business

Enable more precise decisions through greater context

Democratize data access for data science discovery

While Hadoop can store and access vast amounts of detailed data at lower costs, it is not as well suited to the fast, drill-down nature of today's business questions. Through data hierarchies that enable online analytical processing (OLAP) analysis of Hadoop data, enhancements in Spark SQL, and compiled queries for accelerated processing across nodes, SAP HANA Vora enables precision decision making across all the data in enterprise applications, data warehouses, data lakes, and edge sensors.

SAP HANA Vora works with all major Hadoop distributions and applies the power of in-memory processing to massively distributed data stores. By helping to overcome the limitations of batch-oriented processing, it enables real-time, iterative access to data on Hadoop clusters.

Companies can now discover new insights by combining traditional sources of data with valuable data arriving continually from outside the organization, using enterprise-grade data management practices.



Combine business data with external data sources to make decisions that respond immediately to constantly changing circumstances.



Democratize data access for data science discovery

In-memory computing on Hadoop that is built for business

Enable more precise decisions through greater context

Democratize data access for data science discovery

Data scientists and developers often work with Spark and Hadoop for data discovery and experimentation involving massive amounts of unstructured data. Through the enhancements to the Spark SQL Data Source application programming interface, SAP HANA Vora enables data scientists to enrich their candidate data sets in Hadoop with data in SAP HANA interactively.

SAP HANA Vora allows social, IoT, and cloud source data to be understood in the context of core enterprise data to reveal business-coherent insights in real time. And building new applications is straightforward for developers who prefer the Apache Spark environment and want to use familiar programming tools. The discovery work of data science is no longer isolated to a self-managed data lake and can be integrated into the digital enterprise data management framework.



Embrace data science work on Hadoop as part of the enterprise data management framework.



In-memory computing on Hadoop that is built for business

Enable more precise decisions through greater context

Democratize data access for data science discovery

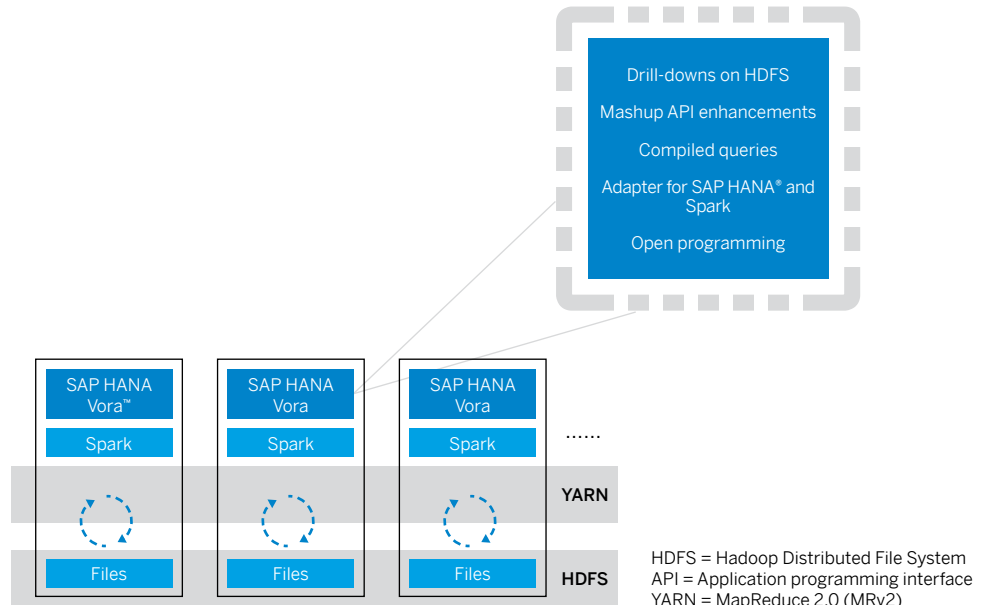


Figure: Solution diagram for the SAP HANA Vora engine



Capture the full potential of Big Data

Capture the full potential of Big Data

SAP HANA Vora enables digital businesses to innovate and compete through in-the-moment contextual awareness. Using familiar OLAP and programming languages, you can quickly analyze all available data in enterprise and Hadoop systems in a coherent way, bridging the divide between enterprise data and the onslaught of Big Data generated by the digital economy.

The ability to infuse enterprise data with up-to-the-moment data from external sources for

contextually savvy decisions and processes opens a new world of opportunities across almost every industry and department:

- Sales can adjust sales and business resources on the fly based on current customer demand
- Marketing can optimize campaigns based on what customers are saying
- Operations can analyze combined enterprise data and Big Data without IT intervention for more-accurate projections



Unlock meaning from vast pools of distributed data at the speed of business to drive innovation and competitive advantage.





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Summary

SAP HANA Vora™ reveals unprecedented business context by combining business data with Hadoop data with an in-memory processing engine. You can quickly drill down interactively into data regardless of its type for deeper meaning. Empower your enterprise to be smarter, faster, and more agile than competitors.

Objectives

- Process enterprise and Hadoop data simply and cost-effectively for real-time business applications and analytics
- Provide enterprise-class, drill-down insight into raw data
- Blend incoming data from customers, partners, and smart devices into enterprise processes
- Combine business data with external data sources to make precise decisions through greater context

Solution

- In-memory query engine running on Apache Spark execution framework
- Compiled queries for accelerated processing across nodes
- Enhanced Spark SQL semantics with hierarchies for analytical processing
- Enhanced mashup application programming interface (API) for easier access to enterprise application data for machine learning workloads
- Support for all Hadoop distributions

Benefits

- Deliver business coherence for precise decision making with contextual awareness
- Democratize access for data scientists for new discoveries
- Simplify Big Data ownership through combined data access and processing

Learn more

To find out more, call your SAP representative today or visit us online at www.sap.com/hana-vora.



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